REMARKS

I. STATUS OF THE CLAIMS

Claims 1, 3, 5, 10 and 14-16 have been amended. New claims 17-19 have been added. Claims 1-19 are pending and under consideration. Applicants submit that no new matter has been added.

II. REJECTION UNDER 35 U.S.C. § 102(b)

Claims 1-9, 11 and 14-16 were rejected under 35 U.S.C. § 102(b) as being anticipated by Yanigida et al., (US 5,775,918). This rejection is respectfully traversed.

The present invention relates to helping an operator recognize marks entered into an answer column disposed on a mark sheet (slip). More specifically, the present invention processes a slip such as those shown in Figs. 10A-10C and 14A-14C. In the present invention, a number of response options are prepared for each of the associated questions. The prepared response options are disposed on a slip together with columns of answer entry spaces (answer columns) for an examinee to enter markings indicating the selected answer for each of the questions. The response options are processed and a recognition result is outputted. This allows an operator to efficiently visually inspect the recognition results for correctness and make any necessary changes.

Yanigida does not disclose the distinguishing features of the present invention.

For example, amended claim 1 discloses:

> "A slip processing device that processes a slip with a ***plurality*** *of answer columns* to be checked with one or more marks, comprising:
>
> a slip recognition unit. . .
>
> an ***answer column position definition unit*** storing position definition information ***identifying locations of the answer columns***;
>
> *an image accentuation unit accentuating pixels located in a vicinity of each of the marks checked in* ***any*** *of the answer columns in the image data by giving those pixels a color according to the detected result and the* ***position definition information***; and

an output control unit *outputting the image data accentuated by the image accentuation unit on a display device to prompt an operator to examine the accentuated image data*."

In contrast, Yanigida describes an apparatus for determining correctness of answers respectively written into answer entry spaces provided on a sheet in which only *one answer entry space* is provided for any of the questions of a set. (See Yanigida Fig. 19). Although, Yanigida describes printing on a recording sheet symbols representing correct and incorrect answers, the recording sheet in Yanigida only contains one answer column (See Yanigida col. 16 ln 34-51). Therefore, Yanigida does not describe an "***answer column position definition unit*** storing position definition information ***identifying locations of the answer columns***." (See also Fig. 5 and 6).

The Office Action also contends that Yanigida [Fig. 14, col. 13, ln 12-35, 63-67, and col. 14, ln 1-40] discloses the "image accentuation unit" of the present invention. (See Office Action pg. 3). This contention is respectfully traversed. The portion of the specification to which the Office Action cites relates to scanning and processing an image generally. Moreover, Yanigida fails to disclose an image accentuation unit that accentuates pixels "located in a vicinity of each of the marks checked in ***any of the answer columns*** in the image data by giving those pixels a color according to the detected result and the ***position definition information***."

The Office Action contends that Yanigida [Fig. 15A] describes the "output control unit" of the present invention. (See Office Action pg. 3). This contention is respectfully traversed. Yanigida does not describe a system wherein an operator can *inspect* correctness of a recognition result. The relevant description in Yanigida fails to describe "an output control unit outputting the ***image data accentuated by the image accentuation unit*** on a display device ***to prompt an operator to examine the accentuated image data***." (See Figs. 14A-14D, 16 describing how an operator examines the accentuated image data).

Applicants respectfully assert that Yanigida fails to describe the distinguishing features of the present invention as described above. Accordingly, claim 1 as amended is patently distinguishable over Yanigida.

Claims 14-16

In a non-limiting manner, claims 14-16 are also patentable over Yanigida for the reasons discussed above.

Claims 2-7

Dependent claims 2-7 depend from the above-discussed independent claim 1 and are also patentable over Yanigida for the reasons discussed above. The dependent claims also recite additional features not described in Yanigida. Applicants submit that claims 2-7 are independently patentable over Yanigida.

Claim 2 for example recites "the slip processing device according to claim 1, wherein said image accentuation unit is a ***pixel value modification unit*** modifying the values of pixels located in the vicinity of the answer column." The Office Action contends that Yanigida [Fig 13, element 52, col. 13 ln 20-26] describes this feature. (See Office Action pg. 3). This contention is respectfully traversed.

The portion of the specification to which the Office Action cites relates to the process of conventionally scanning/processing an image. More specifically, Yanigida recites "transform[ing] the analog R, G and B signals from the image sensor to digital signals and then executes offset correction. . . and other *conventional processing* with digital signals. . ." (Emphasis added, Yanigida col. 13 ln 21-24). The pixel modifications described in Yanigida relate to correcting the image due inaccuracies during the scanning process (i.e. black offset correction and pixel shading correction). Yanigida does not describe "***modifying the values of pixels located in the vicinity of the answer column***" to allow an operator to *examine* the accentuated image data for correctness. Therefore, claim 2 recites additional features not present in Yanigida. Accordingly, claim 2 is independently patentable over Yanigida. Dependent claims 3-7 depend from claim 2 and are also independently patentable over Yanigida for the reasons discussed above.

Claims 8, 9 and 11

Dependent claims 8, 9 and 11 depend from the above-discussed independent claim 1 and are also patentable over Yanigida for the reasons discussed above. The dependent claims also recite additional features not described in Yanigida. For example, claim 8 relates to a "*recognized result modification unit modifying the detected result.*" This feature is not described in Yanigida. Applicants submit that claims 8, 9 and 11 are also independently patentable over Yanigida.

Accordingly, all claims 1-9, 11 and 14-16 are patently distinguishable over Yanigida and applicants respectfully request the 35 U.S.C. § 102(b) rejection be withdrawn.

III. REJECTION UNDER 35 U.S.C. § 103(a)

Claims 10, 12 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yanagida et al., (US 5,775,918), as applied to the claims 1-9, 11 and 14-16 above and further in view of Matsuno et al. (US 6,320,983 B1).

Dependent claims 10, 12 and 13 depend from the above-discussed independent claim 1 and neither Yanigida nor Matsuno, individually or combined, describe the features of claim 1 for the reasons discussed above. Claims 10, 12 and 13 also recite additional features not described in the prior art.

For claim 10, the Office Action contends that Matsuno [Fig. 2 element 300] describes "a pointing device, wherein the designation of pixels is made by selecting the image data outputted on the display device using the pointing device." (See Office Action pg. 6). The portion of the specification to which the Office Action cites relates, however, specifically references a "keyboard" and not a more general "pointing device."

For claims 12 and 13, neither Yanigida nor Matsuno, individually or combined, describe a "*recognized result modification unit modifying the detected result.*" Moreover, the relevant portions of Matsuno to which the Office Action contends describe the features of claims 12 and 13, do not describe "an output control unit" in which data can be *scrolled.*

Therefore, applicants submit that claims 10, 12 and 13 are independently patentable over the prior art. Accordingly, applicants respectfully request the 35 U.S.C. § 103(a) rejection be withdrawn.

IV. NEW CLAIMS

New claims 17-19 have been added. Claims 17-19 are directed towards a method for processing a multiple choice answer sheet having answers indicated by marks, comprising "detecting a mark among a ***plurality of answer spaces***" and ***highlighting the mark*** in an image of the answer sheet" where the highlighting uses a different color and flood fills an answer area. Neither Yanigida nor Matsuno, individually or combined, describe these features. Accordingly, applicants submit that claims 17-19 are patently distinguishable over the prior art.

V. CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: 5/9/7

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